

Compression Load Cells



FEATURES

- Capacity range: 500, 1K, 2K, 3K, 5K, 10K, 20K, 30K, 50K, and 100K lb (227, 454, 907, 1.4K, 2.27K, 4.54K, 9K, 13.6K, 22.7K, and 45.4K kg)
- Environmentally sealed
- Operational: -30° to +175°
- Low deflection
- Compact and rugged
- FM and CSA approved

DESCRIPTION

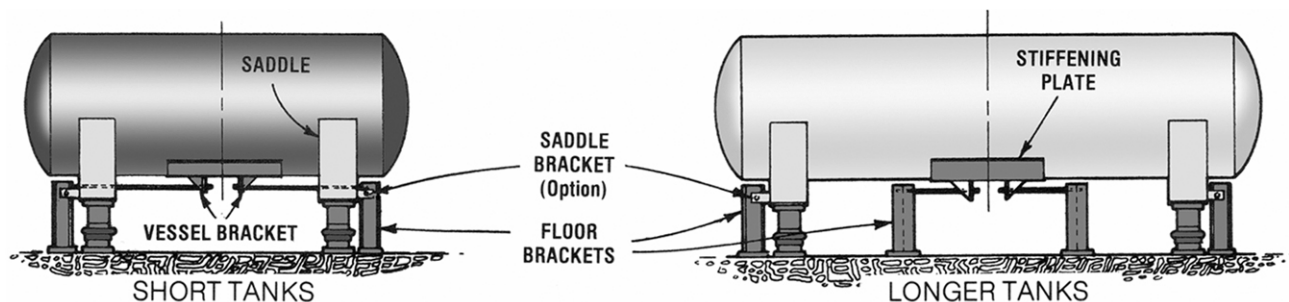
C3P1 and C3P2 cells are fabricated with high strength 'ring' type elements to provide an output signal of 3 mV/V at rated capacity. Each cell is designed for minimum deflection and 150% safe overload without damage. C3P2 cells contain a second bridge. The second bridge can be used simultaneously with the first bridge for dual output or be reserved as a backup in case of failure in the first bridge. Double diaphragm fabrication offers precision performance and long term reliability. Low deflection and superior sealing guarantee trouble-free operation.

Relatively low mass and small deflection under load, produce excellent frequency response. Overall, C3P1/C3P2 cells perform superbly in many environments where other transducers cannot.

APPLICATIONS

- Test and measurement
- Calibration standards
- Redundant weighing systems

CONFIGURATION



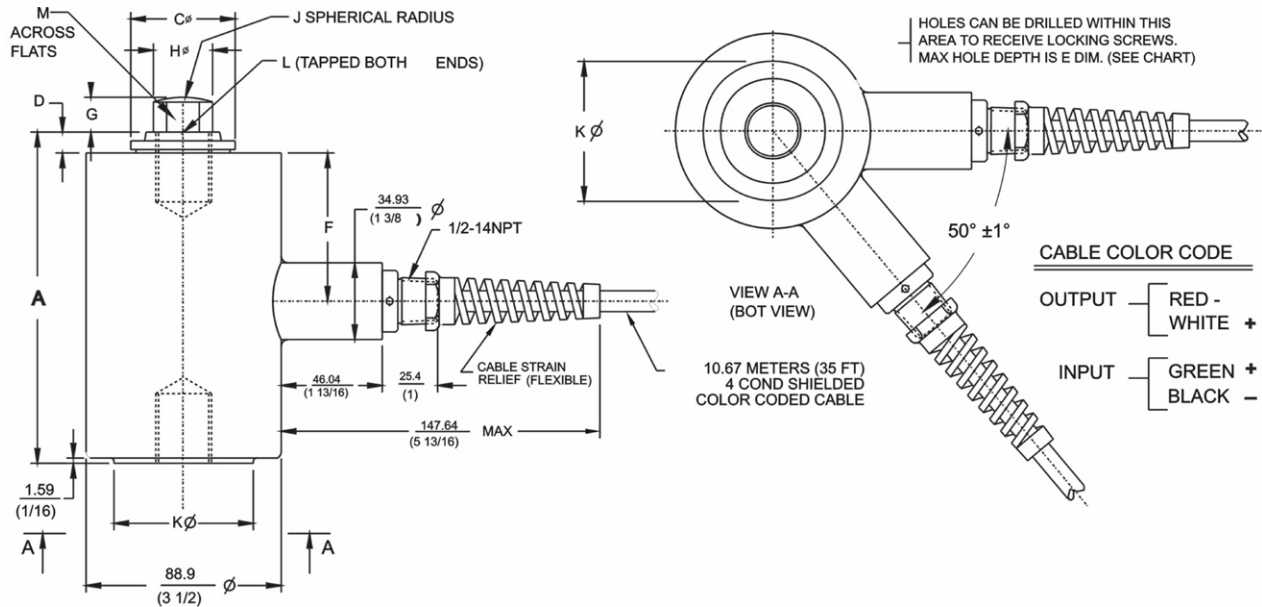
Model C3P1 & C3P2

Vishay BLH

Compression Load Cells



OUTLINE DIMENSIONS - DOUBLE BRIDGE - 500 TO 10K POUNDS

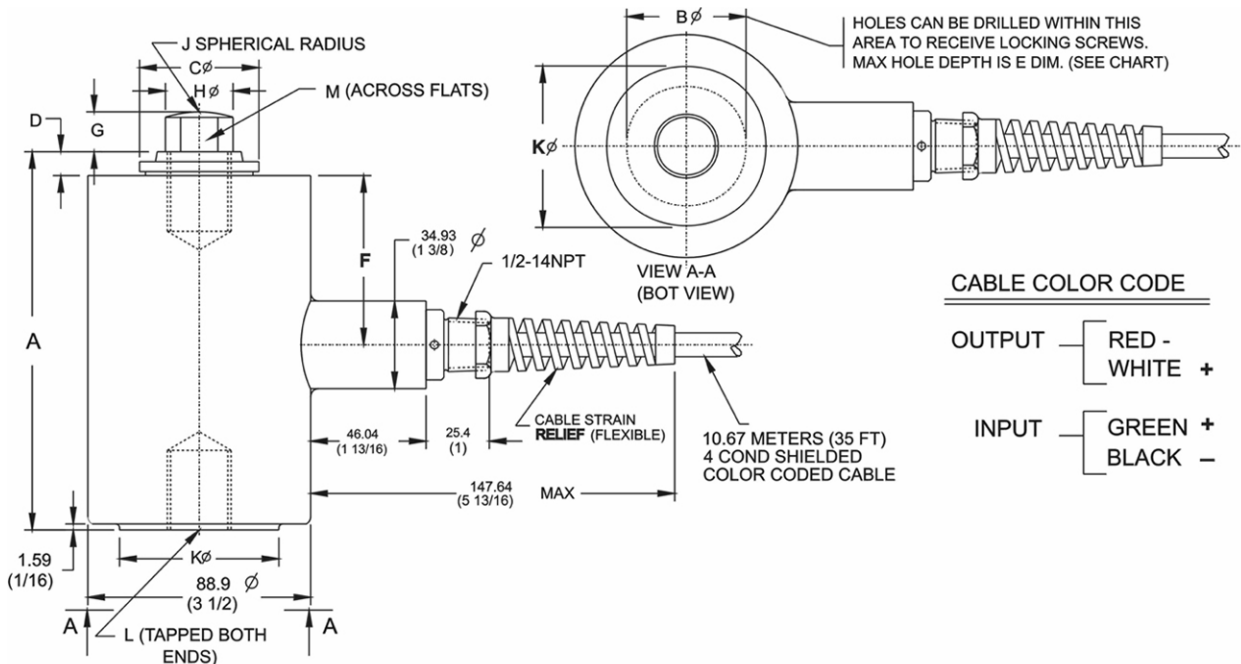


CABLE COLOR CODE

- OUTPUT — RED - WHITE +
- INPUT — GREEN + BLACK -

CAP.	KILOGRAMS (POUNDS)	A	B ϕ	C ϕ	D	E	F	G	H ϕ	J	K ϕ	L (TAPPED)	M
227 (500) THRU 1361 (3000)		115.89 (4 9/16)	—	26.99 (1 1/16)	6.35 (1/4)	—	57.15 (2 1/4)	9.53 (3/8)	16 (5/8)	50.8 (2)	31.75 (1 1/4)	1/2-20UNF-2B X 1/2 DP	9.53 (3/8)
2268 (5000) & 4536 (10000)		150.81 (5 15/16)	44.45 (1 3/4)	47.63 (1 7/8)	9.53 (3/8)	12.7 (1/2)	67.47 (2 21/32)	16 (5/8)	26.99 (1 1/16)	101.6 (4)	63.5 (2 1/2)	1-14UNS-2B X 1 1/4 DP	22.35 (7/8)

OUTLINE DIMENSIONS - SINGLE BRIDGE - 500 TO 10K POUNDS

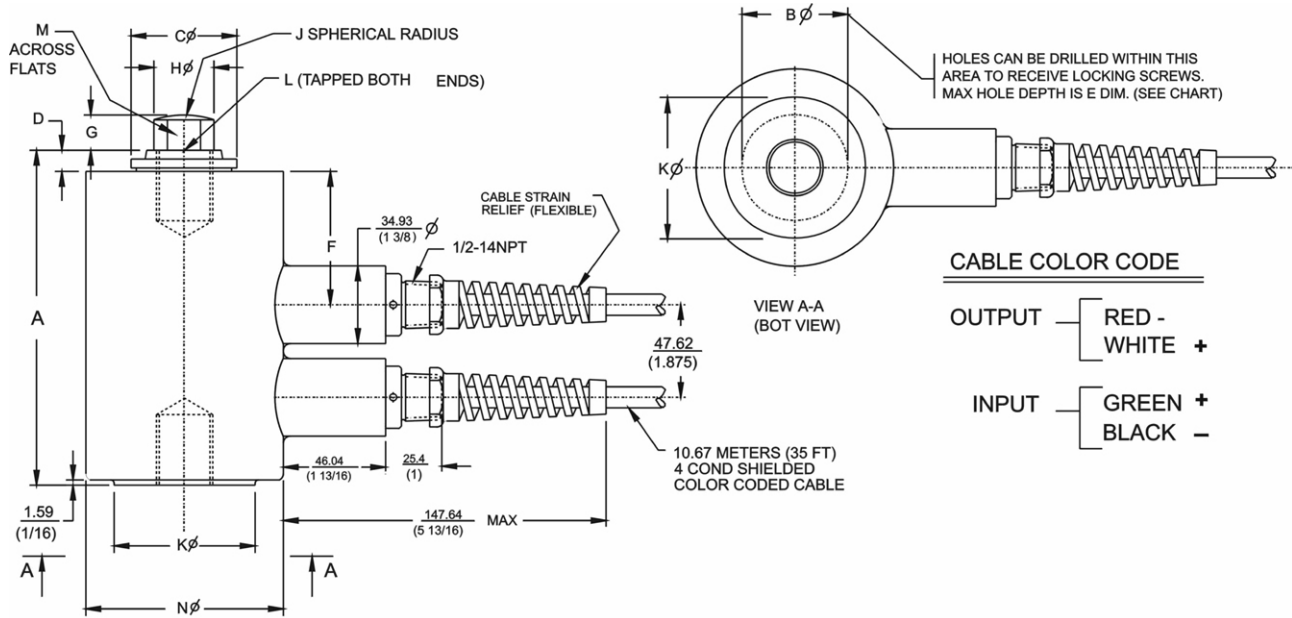


CABLE COLOR CODE

- OUTPUT — RED - WHITE +
- INPUT — GREEN + BLACK -

CAP.	KILOGRAMS (POUNDS)	A	B ϕ	C ϕ	D	E	F ϕ	G	H ϕ	J	K ϕ	L (TAPPED)	M
227 (500) THRU 1361 (3000)		115.89 (4 9/16)	—	26.99 (1 1/16)	6.35 (1/4)	—	57.15 (2 1/4)	9.53 (3/8)	16 (5/8)	50.8 (2)	31.75 (1 1/4)	1/2-20UNF-2B X 1/2 DP	9.53 (3/8)
2268 (5000) & 4536 (10000)		150.81 (5 15/16)	44.45 (1 3/4)	47.63 (1 7/8)	9.53 (3/8)	12.7 (1/2)	67.47 (2 21/32)	16 (5/8)	26.99 (1 1/16)	101.6 (4)	63.5 (2 1/2)	1-14UNS-2B X 1 1/4 DP	22.35 (7/8)

OUTLINE DIMENSIONS - DOUBLE BRIDGE - 20K TO 50K POUNDS

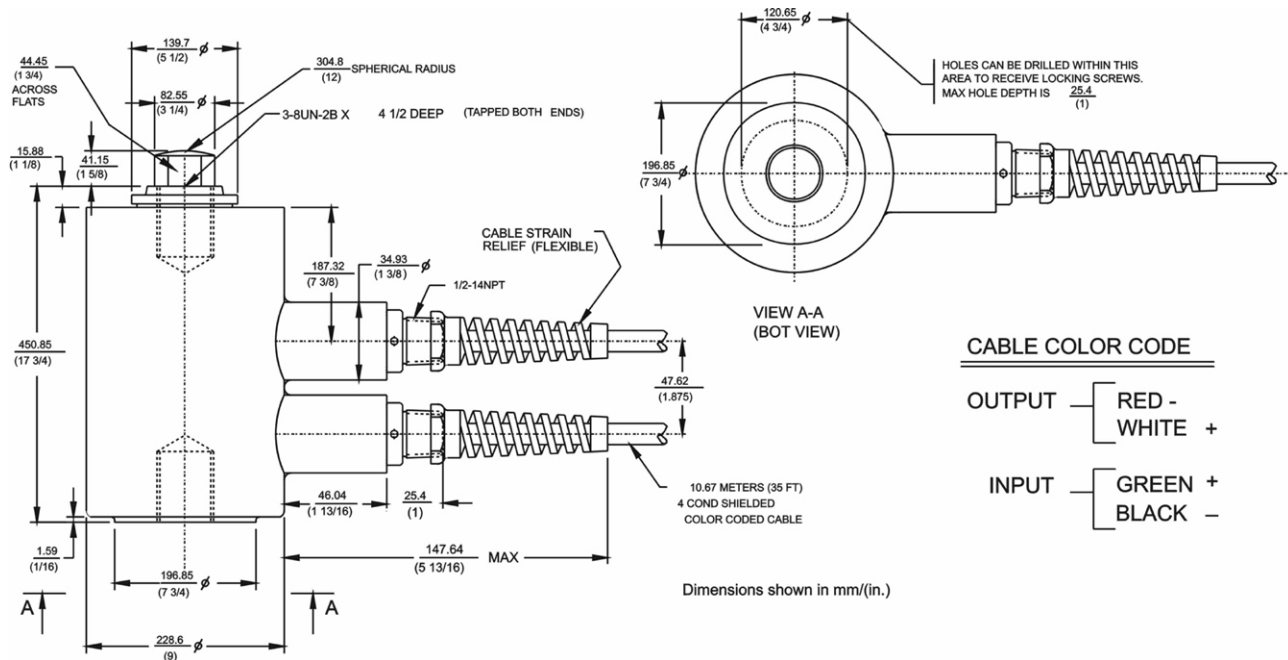


CABLE COLOR CODE

- OUTPUT — RED -
 — WHITE +
- INPUT — GREEN +
 — BLACK -

CAP.	KILOGRAMS (POUNDS)	A	B ϕ	C ϕ	D	E	F	G	H ϕ	J	K ϕ	L (TAPPED)	M	N ϕ
9072 (20,000)	THRU 13608 (30,000)	215.9 (8 1/2)	66.68 (2 5/8)	69.85 (2 3/4)	12.7 (1/2)	25.4 (1)	86.52 (3 13/32)	25.00 (63/64)	41.28 (1 5/8)	203.2 (8)	101.6 (4)	1 1/2-12UNF-2B X 1 3/4 DEEP	31.75 (1 1/4)	127.0 (5)
22680 (50,000)		290.51 (11 7/16)	95.25 (3 3/4)	101.6 (4)	15.88 (5/8)	25.4 (1)	113.50 (4 15/32)	25.00 (63/64)	57.15 (2 1/4)	203.2 (8)	146.05 (5 3/4)	2-12UN-2B X 2 1/4 DEEP	44.45 (1 3/4)	165.1 (6 1/2)

OUTLINE DIMENSIONS - DOUBLE BRIDGE - 100K POUNDS



CABLE COLOR CODE

- OUTPUT — RED -
 — WHITE +
- INPUT — GREEN +
 — BLACK -

Model C3P1 & C3P2

Vishay BLH

Compression Load Cells



SPECIFICATIONS

Performance

Capacities	500, 1K, 2K, 3K, 5K, 10K, 20K, 30K, 50K, & 100K lb (227, 454, 907, 1.4K, 2.27K, 4.54K, 9K, 13.6K, 22.7K, and 45.4K kg)
Rated Output (RO)	3.0 mV/V (+/-0.10%)
Repeatability	0.02% RO
Combined Error	0.10% RO - 500 lb 0.07% RO (1K - 100K lb)
Zero Balance	1.0% RO
Creep (20 minutes)	0.03% RO
Temperature Effects:	
On Zero Balance	0.0015%RO/°F
On Rated Output	0.0008%Load/°F

Electrical

Recommended Excitation	10 Vac-dc
Input Resistance	350 ohms (+/-3.5)
Output Resistance	350 ohms (+/-3.5)
Cable Length	35 feet
Number of Bridges	single or double

Temperature

Safe Range	-30 to +175°F
Compensated Range	+30 to +130°F

Adverse Load Ratings

Safe Overload	150% rated capacity
Ultimate Overload	300% rated capacity

Material

Element	high grade tool steel
Cannister	low carbon steel, painted*

Sealing

Environmental Class	IP67
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Deflection

500 lb	0.007 inches
1K lb	0.006 inches
2K, 3K lb	0.005 inches
5K lb	0.007 inches
10K lb	0.005 inches
20K, 30K lb	0.007 inches
50K lb	0.010 inches
100K lb	0.013 inches

Approvals

FM/CSA Intrinsically Safe	Class I, II, III; Division 1, Groups A-G
FM/CSA Nonincendive	Class I, Division 2, Groups A-D

*single component, waterborne polyurethane copolymer - high gloss.

Vishay BLH is continually seeking to improve product quality and performance. Specifications may change accordingly.

VISHAY TRANSDUCERS (VT) SALES OFFICES

VT Americas System Products Norwood, MA

PH: +1-781-298-2200
FAX: +1-781-762-3988
vts.us@vishaymg.com

VT Norway System Products Oslo

PH: +47-22-884090
FAX: +47-22-884099
vt.no@vishaymg.com

VT Canada Toronto

PH: +1-416-251-2554
FAX: +1-416-251-2690
vt.can@vishaymg.com

VT Finland System Products Jorvas

PH: +358-9-8194-220
FAX: +358-9-8194-2211
vt.fi@vishaymg.com

VMG UK Basingstoke

PH: +44-125-646-2131
FAX: +44-125-647-1441
vt.uk@vishaymg.com

VMG Israel Netanya

PH: +972-9-863-8888
FAX: +972-9-863-8800
vt.il@vishaymg.com

VT Sweden Karlskoga

PH: +46-586-630-00
FAX: +46-586-630-99
vt.se@vishaymg.com

VT China Tianjin

PH: +86-22-2835-3503
FAX: +86-22-2835-7261
vt.prc@vishaymg.com

VMG Germany Heilbronn

PH: +49-7131-3901-260
FAX: +49-7131-3901-2666
vt.de@vishaymg.com

VT Taiwan* Taipei

PH: +886-2-2696-0168
FAX: +886-2-2696-4965
vt.roc@vishaymg.com

*Asia except China

VMG France Chartres

PH: +33-2-37-33-31-20
FAX: +33-2-37-33-31-29
vt.fr@vishaymg.com